ARIZONA GAME AND FISH DEPARTMENT
HABITAT PARTNERSHIP COMMITTEE
HABITAT ENHANCEMENT AND WILDLIFE MANAGEMENT PROPOSAL

Game Branch / HPC Project Number:	12-215

PROJECT INFORMATION

Project Title: Effect of Fall Harvest on Turkey Populations in Arizona 2013

Region and Game Management Unit: Regions 1 (GMUs 1 and 4) and 2 (GMUs 8, 12A)

Local Habitat Partnership Committee (LHPC):
- Williams/Flagstaff HPC

Was the project presented to the LHPC?
YES[X] **NO**[]

Has this project been submitted in previous years? **YES**[X] **NO**[]
If Yes, was it funded? **YES**[X] **NO**[] → **HCP Project #**: 11-210

Project Type: Wildlife Management - Telemetry, Mortality

Brief Project Summary: Radio transmitters will be attached to turkeys in 2 Game Management Units (GMU) in Regions 1 (1 and 4) and 2 (8 and 12A). We will determine if fall harvest impacts turkey populations.

Big Game Wildlife Species to Benefit: Wild Turkey. If fall harvest impacts turkey populations, this could lead to more conservative fall harvests, resulting in increased turkey populations and greater hunting opportunity.

Implementation Schedule (Month/Day/Year):

Project Start Date: December 1, 2012

Project End Date: December 31, 2014

Environmental Compliance:

NEPA Completed: YES[X] No[] N/A[]
Projected Completion Date: _____

State Historic Preservation Office - Archaeological Clearance:
YES[] No[X] N/A[]
Projected Completion Date: _____

Arizona Game and Fish Department EA Checklist: N/A[]
To be Completed by: Tom McCall
Projected Completion Date: December 2012

PROJECT FUNDING

Special Big Game License Tag Funds Requested:	**$** 5,400
Cost Share or Matching Funds:	**$** 12,850
Total Project Costs:	**$ 18,250**

PARTICIPANT INFORMATION

Applicant (please print):	**Address**:	**E-mail**:
Tom McCall	Arizona Game and Fish Dept. 3500 S. Lake Mary Rd. Flagstaff, AZ 86001	tmccall@azgfd.gov
Telephone: (928) 214-1248		**Date**: 8/27/2012

AGFD Contact and Phone No. (If applicant is not AGFD personnel):

Project has been coordinated with: Brian Wakeling and Rick Langley

NEED STATEMENT – PROBLEM ANALYSIS:
Arizona's turkey population is relatively small, compared to those in many other states. Either-sex of turkeys can be harvested during the fall, but spring harvest is for bearded turkeys and most of these are males. Excessive fall harvest could be keeping the turkey population below its potential.

In the mid-1990s, Vanguilder and Kurzejeski completed a turkey study in Missouri looking at the impact of fall harvest. They concluded that less than 5-10% of a turkey population should be harvested in the fall to ensure that fall harvest does not impact the population.

However, Arizona does not have detailed population data to know what percentage of the population is harvested each spring. To ensure a stationary or increasing turkey population, some biologists believe that the preferred approach is to set conservative fall harvest levels and carefully monitor future harvest and population indices. Some biologists have suggested that a conservative fall harvest should be about one-third to one-half of the spring harvest so that there are no population level impacts. Currently, fall harvest of turkeys in GMUs in Arizona ranges from one-half to 2 times the spring harvest. A 2006 Department survey showed that of hunters that preferred turkey hunting over other types of hunting, 70% of the hunters preferred the spring turkey season over the fall.

States are across the board on whether or not they have a fall harvest and how intensive the fall harvest is. Some states that have many more turkeys than Arizona, don't have a fall hunting season or it is very limited, such as Arkansas (limited), Georgia, Indiana (limited) Louisiana, Mississippi (limited), North Carolina, South Carolina, Virginia (limited), West Virginia (limited), and Utah.

PROJECT OBJECTIVES:
The objectives of this project are to determine what proportion of the turkey population is removed due to fall harvest over a 2-year period.

PROJECT DESCRIPTION AND STRATEGIES:
Twenty-five yearling and adult hens would receive backpack VHF transmitters in each unit. Eight-12 new birds in each unit would need to receive transmitters each year because of the mortality of radioed birds. Annual mortality normally runs from 30 to 50%. The project may extend for a third year if necessary.

Turkeys would be captured with rocket nets from September-March each year. As part of the revised Hot Works Policy, no rocket netting would occur during times of "high" or "extreme" fire danger, or at any time during a Red Flag Warning/Watch. All personnel will have basic knowledge of accepted use of rocket or cannon nets for wildlife capture.

The Regional Game Specialists and Regional Wildlife Managers would conduct the field work.

Each transmitter will have an 8-hr delay mortality switch. Radioed turkeys will be monitored from fixed-wing aircraft and from ground 6 times per year. In particular, turkeys would be monitored just prior to the fall archery season and just after the fall shotgun season.

Causes of mortality during fall season will be determined by investigating the recovery site, carcass, transmitter, and harness. If illegal or wounding losses are suspected, carcasses that are recovered will be x-rayed to determine presence of shot. Turkeys thought to have died due to disease will be sent to

the Washington State University's Veterinarian Lab. Few carcasses are anticipated because of the rapid rate that they will probably be consumed by predators or scavengers.

If female turkeys survive a year, they will be added in the following year's radioed birds. Survival rates of turkeys will be calculated. Finally, we would use fall and spring harvest information to determine turkey population trends.

PROJECT LOCATION:
Region 1 – GMUs 1 and 4.

Region 2 – GMUs 8 and 12A.

LAND OWNERSHIP AT PROJECT SITE (Please state specifically if PRIVATE PROPERTY and provide landowner's name):
U.S. Forest Service, State Lands

IF PRIVATE PROPERTY, IS THERE A STEWARDSHIP or LANDOWNER AGREEMENT BETWEEN THE LANDOWNER AND THE DEPARTMENT?
YES[] NO[]

HABITAT DESCRIPTION:
Major vegetation zones for the project areas are a mixture of Montane Conifer Forest, Pinyon-Juniper Woodland, Riparian Deciduous Woodland, and Grassland.

Average elevation is 6,800 feet.

ITEMIZED USE OF FUNDS:
Special Big Game License Tag Funds
Year 2
Radio transmitters – 30@$180 each = $5,400

Cost Share or Matching Funds
Year 2
Radio transmitters - 10@$180 each = $1,800
Fixed-wing flight time to monitor radios - 72 hours@ per hour = $10,800
Supplies – shock cord for attaching transmitters, rocket-net charges = $250
Total = $12,850

LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:
The National Wild Turkey Federation (NWTF) provided $5,000 towards the project for 2012, and they will be asked to participate financially in 2013. NWTF members will be asked to volunteer for the live-trapping of the turkeys. The project proposal was presented at NWTF's statewide meeting and the Mingus Mountain Longbeard Chapter meeting.

PROJECT MONITORING PLAN:
Radioed turkeys will be monitored from fixed-wing aircraft and from the ground 6 times per year. Monitoring will be emphasized just prior to the fall archery season and just after the fall shotgun season.

PROJECT MAINTENANCE:
Regions 1 and 2 game specialists and wildlife managers would provide project maintenance. Eight-12 new turkeys in each unit would receive transmitters each year because of the annual mortality of radioed birds.

PROJECT COMPLETION REPORT TO BE FILED BY:
Tom McCall

WATER DEVELOPMENT PROJECTS (*see attached worksheet***):**
N/A

TREE SHEARING (AGRA-AXE, PUSH) PROJECTS (*see attached worksheet***):**
N/A